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Sequence Listing was accepted with existing errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Wed Jun 20 10:43:59 EDT 2007

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Application No: 10715868

Version No: 2.1

Input Set:

Output Set:

Started: 2007-06-20 10:43:17.045

Finished: 2007-06-20 10:43:18.236

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 191 ms

Total Warnings: 7

Total Errors: 0

No. of SeqIDs Defined: 9

Actual SeqID Count: 9

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)

SEQUENCE LISTING

<110> Arroyo, Juan
 Miller , Charles
 Catalan, John Avram
 Monath, Thomas P.

<120> West Nile Virus Vaccine

<130> 06132/075002

<140> US 10/715,868

<141> 2003-11-17

<150> US 60/426,592

<151> 2002-11-15

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<170> PatentIn version 3.3

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Met Ser Lys Lys Pro Gly	
1 5	
ggg ccc ggc aag agc cgg gct gtc aat atg cta aaa cgc gga atg ccc	162
Gly Pro Gly Lys Ser Arg Ala Val Asn Met Leu Lys Arg Gly Met Pro	
10 15 20	
cgc gtg ttg tcc ttg att gga ctg aag agg gct atg ttg agc ctg atc	210
Arg Val Leu Ser Leu Ile Gly Leu Lys Arg Ala Met Leu Ser Leu Ile	
25 30 35	
gac ggc aag ggg cca ata cga ttt gtg ttg gct ctc ttg gcg ttc ttc	258
Asp Gly Lys Gly Pro Ile Arg Phe Val Leu Ala Leu Leu Ala Phe Phe	
40 45 50	
agg ttc aca gca att gct ccg acc cga gca gtg ctg gat cga tgg aga	306
Arg Phe Thr Ala Ile Ala Pro Thr Arg Ala Val Leu Asp Arg Trp Arg	
55 60 65 70	
ggt gtg aac aaa caa aca gcg atg aaa cac ctt ctg agt ttt aag aag	354
Gly Val Asn Lys Gln Thr Ala Met Lys His Leu Leu Ser Phe Lys Lys	
75 80 85	
gaa cta ggg acc ttg acc agt gct atc aat cgg cgg agc tca aaa caa	402
Glu Leu Gly Thr Leu Thr Ser Ala Ile Asn Arg Arg Ser Ser Lys Gln	
90 95 100	
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Lys Lys Arg Gly Gly Lys Thr Gly Ile Ala Val Met Ile Gly Leu Ile	
105 110 115	
gcc agc gta gga gca gtt acc ctc tct aac ttc caa ggg aag gtg atg	498
Ala Ser Val Gly Ala Val Thr Leu Ser Asn Phe Gln Gly Lys Val Met	
120 125 130	
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Met Thr Val Asn Ala Thr Asp Val Thr Asp Val Ile Thr Ile Pro Thr	
135 140 145 150	
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Ala Ala Gly Lys Asn Leu Cys Ile Val Arg Ala Met Asp Val Gly Tyr	
155 160 165	
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Met Cys Asp Asp Thr Ile Thr Tyr Glu Cys Pro Val Leu Ser Ala Gly	
170 175 180	
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Asn Asp Pro Glu Asp Ile Asp Cys Trp Cys Thr Lys Ser Ala Val Tyr	
185 190 195	
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200	210
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Lys Gly Ala Trp Met Asp Ser Thr Lys Ala Thr Arg Tyr Leu Val Lys	
235	240 245
aca gaa tca tgg atc ttg agg aac cct gga tat gcc ctg gtg gca gcc	882
Thr Glu Ser Trp Ile Leu Arg Asn Pro Gly Tyr Ala Leu Val Ala Ala	
250	255 260
gtc att ggt tgg atg ctt ggg agc aac acc atg cag aga gtt gtg ttt	930
Val Ile Gly Trp Met Leu Gly Ser Asn Thr Met Gln Arg Val Val Phe	
265	270 275
gtc gtg cta ttg ctt ttg gtg gcc cca gct tac agc ttc aac tgc ctt	978
Val Val Leu Leu Leu Leu Val Ala Pro Ala Tyr Ser Phe Asn Cys Leu	
280	285 290
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Gly Met Ser Asn Arg Asp Phe Leu Glu Gly Val Ser Gly Ala Thr Trp	
295	300 305 310
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Val Asp Leu Val Leu Glu Gly Asp Ser Cys Val Thr Ile Met Ser Lys	
315	320 325
gac aag cct acc atc gat gtg aag atg atg aat atg gag gcg gcc aac	1122
Asp Lys Pro Thr Ile Asp Val Lys Met Met Asn Met Glu Ala Ala Asn	
330	335 340
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Leu Ala Glu Val Arg Ser Tyr Cys Tyr Leu Ala Thr Val Ser Asp Leu	
345	350 355
tcc acc aaa gct gcg tgc ccg acc atg gga gaa gct cac aat gac aaa	1218
Ser Thr Lys Ala Ala Cys Pro Thr Met Gly Glu Ala His Asn Asp Lys	
360	365 370
cgt gct gac cca gct ttt gtg tgc aga caa gga gtg gtg gac agg ggc	1266
Arg Ala Asp Pro Ala Phe Val Cys Arg Gln Gly Val Val Asp Arg Gly	
375	380 385 390
tgg ggc aac ggc tgc gga cta ttt ggc aaa gga agc att gac aca tgc	1314
Trp Gly Asn Gly Cys Gly Leu Phe Gly Lys Gly Ser Ile Asp Thr Cys	
395	400 405
gcc aaa ttt gcc tgc tct acc aag gca ata gga aga acc atc ttg aaa	1362
Ala Lys Phe Ala Cys Ser Thr Lys Ala Ile Gly Arg Thr Ile Leu Lys	
410	415 420
gag aat atc aag tac gaa gtg gcc att ttt gtc cat gga cca act act	1410
Glu Asn Ile Lys Tyr Glu Val Ala Ile Phe Val His Gly Pro Thr Thr	

425	430	435	
gtg gag tcg cac gga aac tac tcc aca cag gtt gga gcc act cag gca			1458
Val Glu Ser His Gly Asn Tyr Ser Thr Gln Val Gly Ala Thr Gln Ala			
440	445	450	
ggg aga ttc agc atc act cct gcg gcg cct tca tac aca cta aag ctt			1506
Gly Arg Phe Ser Ile Thr Pro Ala Ala Pro Ser Tyr Thr Leu Lys Leu			
455	460	465	470
gga gaa tat gga gag gtg aca gtg gac tgt gaa cca cgg tca ggg att			1554
Gly Glu Tyr Gly Glu Val Thr Val Asp Cys Glu Pro Arg Ser Gly Ile			
475	480	485	
gac acc aat gca tac tac gtg atg act gtt gga aca aag acg ttc ttg			1602
Asp Thr Asn Ala Tyr Tyr Val Met Thr Val Gly Thr Lys Thr Phe Leu			
490	495	500	
gtc cat cgt gag tgg ttc atg gac ctc aac ctc cct tgg agc agt gct			1650
Val His Arg Glu Trp Phe Met Asp Leu Asn Leu Pro Trp Ser Ser Ala			
505	510	515	
gga agt act gtg tgg agg aac aga gag acg tta atg gag ttt gag gaa			1698
Gly Ser Thr Val Trp Arg Asn Arg Glu Thr Leu Met Glu Phe Glu Glu			
520	525	530	
cca cac gcc acg aag cag tct gtg ata gca ttg ggc tca caa gag gga			1746
Pro His Ala Thr Lys Gln Ser Val Ile Ala Leu Gly Ser Gln Glu Gly			
535	540	545	550
gct ctg cat caa gct ttg gct gga gcc att cct gtg gaa ttt tca agc			1794
Ala Leu His Gln Ala Leu Ala Gly Ala Ile Pro Val Glu Phe Ser Ser			
555	560	565	
aac act gtc aag ttg acg tcg ggt cat ttg aag tgt aga gtg aag atg			1842
Asn Thr Val Lys Leu Thr Ser Gly His Leu Lys Cys Arg Val Lys Met			
570	575	580	
gaa aaa ttg cag ttg aag gga aca acc tat ggc gtc tgt tca aag gct			1890
Glu Lys Leu Gln Leu Lys Gly Thr Thr Tyr Gly Val Cys Ser Lys Ala			
585	590	595	
ttc aag ttt ctt ggg act ccc gca gac aca ggt cac ggc act gtg gtg			1938
Phe Lys Phe Leu Gly Thr Pro Ala Asp Thr Gly His Gly Thr Val Val			
600	605	610	
ttg gaa ttg cag tac act ggc acg gat gga cct tgc aaa gtt cct atc			1986
Leu Glu Leu Gln Tyr Thr Gly Thr Asp Gly Pro Cys Lys Val Pro Ile			
615	620	625	630
tcg tca gtg gct tca ttg aac gac cta acg cca gtg ggc aga ttg gtc			2034
Ser Ser Val Ala Ser Leu Asn Asp Leu Thr Pro Val Gly Arg Leu Val			
635	640	645	
act gtc aac cct ttt gtt tca gtg gcc acg gcc aac gct aag gtc ctg			2082
Thr Val Asn Pro Phe Val Ser Val Ala Thr Ala Asn Ala Lys Val Leu			
650	655	660	

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Ile Glu Leu Glu Pro Pro Phe Gly Asp Ser Tyr Ile Val Val Gly Arg	
665 670 675	
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680 685 690	
ggc aaa gcc ttt aca acc acc ctc aaa gga gcg cag aga cta gcc gct	2226
Gly Lys Ala Phe Thr Thr Thr Leu Lys Gly Ala Gln Arg Leu Ala Ala	
695 700 705 710	
cta gga gac aca gct tgg gac ttt gga tca gtt gga ggg gtg ttc acc	2274
Leu Gly Asp Thr Ala Trp Asp Phe Gly Ser Val Gly Gly Val Phe Thr	
715 720 725	
tca gtt ggg aag gct gtc cat caa gtg ttc gga gga gca ttc cgc tca	2322
Ser Val Gly Lys Ala Val His Gln Val Phe Gly Gly Ala Phe Arg Ser	
730 735 740	
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Leu Phe Gly Gly Met Ser Trp Ile Thr Gln Gly Leu Leu Gly Ala Leu	
745 750 755	
ctg ttg tgg atg ggc atc aat gct cgt gat agg tcc ata gct ctc acg	2418
Leu Leu Trp Met Gly Ile Asn Ala Arg Asp Arg Ser Ile Ala Leu Thr	
760 765 770	
ttt ctc gca gtt gga gga gtt ctg ctc ttc ctc tcc gtg aac gtg cac	2466
Phe Leu Ala Val Gly Gly Val Leu Leu Phe Leu Ser Val Asn Val His	
775 780 785 790	
gct gac act ggg tgt gcc ata gac atc agc cgg caa gag ctg aga tgt	2514
Ala Asp Thr Gly Cys Ala Ile Asp Ile Ser Arg Gln Glu Leu Arg Cys	
795 800 805	
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Gly Ser Gly Val Phe Ile His Asn Asp Val Glu Ala Trp Met Asp Arg	
810 815 820	
tac aag tat tac cct gaa acg cca caa ggc cta gcc aag atc att cag	2610
Tyr Lys Tyr Tyr Pro Glu Thr Pro Gln Gly Leu Ala Lys Ile Ile Gln	
825 830 835	
aaa gct cat aag gaa gga gtg tgc ggt cta cga tca gtt tcc aga ctg	2658
Lys Ala His Lys Glu Gly Val Cys Gly Leu Arg Ser Val Ser Arg Leu	
840 845 850	
gag cat caa atg tgg gaa gca gtg aag gac gag ctg aac act ctt ttg	2706
Glu His Gln Met Trp Glu Ala Val Lys Asp Glu Leu Asn Thr Leu Leu	
855 860 865 870	
aag gag aat ggt gtg gac ctt agt gtc gtg gtt gag aaa cag gag gga	2754
Lys Glu Asn Gly Val Asp Leu Ser Val Val Val Glu Lys Gln Glu Gly	
875 880 885	

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Met Tyr Lys Ser Ala Pro Lys Arg Leu Thr Ala Thr Thr Glu Lys Leu	
890 895 900	
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Glu Ile Gly Trp Lys Ala Trp Gly Lys Ser Ile Leu Phe Ala Pro Glu	
905 910 915	
 ctc gcc aac aac acc ttt gtg gtt gat ggt ccg gag acc aag gaa tgt	2898
Leu Ala Asn Asn Thr Phe Val Val Asp Gly Pro Glu Thr Lys Glu Cys	
920 925 930	
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Pro Thr Gln Asn Arg Ala Trp Asn Ser Leu Glu Val Glu Asp Phe Gly	
935 940 945 950	
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Phe Gly Leu Thr Ser Thr Arg Met Phe Leu Lys Val Arg Glu Ser Asn	
955 960 965	
 aca act gaa tgt gac tcg aag atc att gga acg gct gtc aag aac aac	3042
Thr Thr Glu Cys Asp Ser Lys Ile Ile Gly Thr Ala Val Lys Asn Asn	
970 975 980	
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Asp Thr Trp Lys Leu Glu Arg Ala Val Leu Gly Glu Val Lys Ser	
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Cys Thr Trp Pro Glu Thr His Thr Leu Trp Gly Asp Gly Ile Leu	
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Glu Ser Asp Leu Ile Ile Pro Val Thr Leu Ala Gly Pro Arg Ser	
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1105 1110 1115

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